DOCUMENT RESUME

ED 180 967 SP 015 219

AUTHOR Denton, Jon J.
TITLE Quantifying Teacher Effects with a Data Base for Regression Analysis.
SPONS AGENCY Texas A and M Univ., College Station. Coll. of Education.
PUB DATE 7 Aug 79
GRANT OUR-TAMU-15350-600
NOTE 37p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Data Analysis; Data Bases; *Educational Research; Performance Based Teacher Education; Secondary Education; *Skill Development; *Student Teachers; *Teaching Skills; *Teaching Styles

ABSTRACT

A project was undertaken to create a substantial data file containing multiple measures of learner attainment information in order to provide alternative models for teacher preparation effects through regression analysis. A general description of both the performance-based secondary-level teacher education program at Texas A & M University and the extensive data set, DENNOR, are provided. Data was gathered from a sample of 44 secondary-level student teachers and 4,656 learners taught by the student teachers. The model of instruction that the teacher education program embraces is described in detail. (Author/LH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED180967

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Jon Denton

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Quantifying Teacher Effects with a Data Base for Regression Analysis

Educational Curriculum and Instruction

August 7, 1979

Jon J. Denton
Associate Professor

This report was made possible through a grant (OUR - TAMU - 15350-600) from the Organized Research Fund, College of Education Texas A&M University

SP015219

Recent reviews of research on teacher education are not extant in the professional literature. However, one may find papers which examine the research on teacher education during the decade of the sixties. (Denemark & MacDonald, 1967; Peck & Tucker, 1973). These reviews indicate that large federal grants awarded during this period for teacher education were generally for program development not theory development nor research activity. Therefore it isn't suprising that much of the reported research in these reviews were results from individual projects. Moreover these investigations were centered on instructional approaches, i.e., intensive field experiences, microteaching, self-paced programs; curricular components, namely, interaction analysis, value clarification, behavior modification; and human characteristics, that is, attitudes, personality, dogmatism of teaching candidates and significant others in the instructional setting. These efforts have provided substantial evidence to support the generalization, teaching skills can be taught. While this idea is reassuring to those of us who are engaged in teacher education, it does little to instill public confidence in the ability of professional educators to develop theory and establish comprehensive research programs to improve the teaching process. Peck and Tucker (1973) conclude their review with the following plea for creating research programs rather than unitary projects on teacher education:

> We are genuinely in sight of the theoretical principles, the operational measures, and even the developmental technology for moving into a performance-based method of appraising teaching. A great deal of research remains to be done to discover additional theoretical principles which would lead to more effective training. . . . more expensive evaluative research will be absolutely necessary in order to test and refine instructional systems . . . [1973, p. 971].

Responding to this request a research program has been initiated to collect, analyze and interpret data from all phases of an operating teacher preparation program based on the diagnostic-prescriptive model of teaching. Specifically, this project was undertaken to create a substantial data file containing multiple

measures of learner attainment information. These data will provide many alternatives for modeling teacher preparation effects through regression analysis.

ORGANIZATION OF INVESTIGATION

Program Description

This investigation was conducted under the auspices of an educational curriculum and instruction department at a Land Grant University. The teacher preparation program which participated in the investigation is a competency based program for secondary level teachers fashioned around a diagnostic prescriptive model of instruction (Armstrong, Denton, Savage, 1978). This model conceptualizes teaching as a series of events requiring five distinct sets of instructional skills, that is: Specifying Performance Objectives, Diagnosing Learners, Selecting Instructional Strategies, Interacting with Learners, and Evaluating the Effectiveness of Instruction.

Specifying Performance Objectives - The decisions inherent in this element of the instructional model are instrumental in determining whether the entire instructional process can be successful in producing student learning. Restated, this idea becomes performance objectives determine the direction and focus of instruction. When performance objectives are selected and sequenced according to a logical plan, teachers are in a position of leadership and can justify their program to responsible critics.

Diagnosing Learners - Teachers need information regarding a learner's readiness to begin a proposed new instructional sequence. Bypassing this step in an effort to save instructional time is false economy, since the result may well be frustrated, bored and unmotivated learners. When adequate diagnostic information is available, instructional plans can be developed that meet the informational and emotional needs of the learners.

Selecting Instructional Strategies- In selecting instructional strategies teachers should structure activities that are consistent with the identified performance objectives, the entry levels of the learners, and the events of

instruction espoused by Gagne' (1970). In a sense, selecting instructional strategies is analogous to generating directional research hypotheses. A strategy is created from a wide range of possible approaches which, in the teacher's mind, will likely bring about learner attainment of the performance objectives. The appropriateness of this strategy is "tested" during the implementation and evaluation phases of instruction.

Interacting with Learners - This component represents the "doing" phase of the instructional model. The elegance of the instructional plan becomes unimportant if the timing and continuity of the classroom activities are interrupted creating disorder and predictable management problems. Thus, learning how to interact with learners is, perhaps, the most difficult set of skills for new teachers to attain. Mastering these skills requires considerable practice in actual classroom settings, and serves to justify the emphasis on student teaching experience in teacher preparation programs.

Evaluating the Effectiveness of Instruction - This component serves to gather evidence during and after the teaching of an instructional plan to determine whether the plan "worked." Evaluation should prompt a review of each component in the instructional model. Representative questions to illustrate this review include: Were the performance objectives appropriate? Were the pretests really diagnostic tools? Did the instructional strategies incorporate the events of instruction? Was classroom management sufficient to maintain a favorable learning environment? Were the evaluation tools valid for assessing learner growth and program effectiveness?

This model provides a framework that encourages the development of individual teaching styles. Individualized styles are encouraged because evaluation of instruction is based on learner attainment of performance objectives. Given this operating principle, teachers in preparation are free to choose procedures from their own repertoires that they believe will result in high levels of learner performance. Further, teacher responsibility is well served by this model. This

responsibility comes not because of the teaching candidate's adherence to a set of "ideal role behaviors," but rather in adapting instructional practice, as necessary, to help learners achieve performance objectives that have been selected.

A full semester-full day student teaching program with twelve semester hours being awarded for successful completion of the experience is the culminating experience in this preparation program. During this experience, each student teacher is required to develop and implement two instructional units each of approximately two weeks duration. The instructional units are to include: performance objectives, a diagnostic pretest to determine whether prerequisite knowledges and skills are present, instructional strategies addressed to each performance objective, and criterion-referenced instruments. These units must be deemed acceptable and appropriate by both the classroom supervising teacher and the university supervisor prior to implementation.

Evaluation of student teachers in this program includes supervisor ratings based on in-class observations and instructional materials produced by the student teacher. Generally six supervisor ratings are completed during a semester. These ratings are recorded on an Evaluation Profile instrument. It may be of significance that the final evaluation for each student teacher recorded on this instrument represents a consensus rating resulting from a three-way conference between the student teacher, classroom supervisor and university supervisor. In addition, a Curriculum Context Checklist for rating the components of each instructional unit is completed by the university supervisor. Two of these forms are completed during the course of the field experience.

Student teachers are also requested to contribute to the formative evaluation process by completing weekly reflection sheets throughout the semester. Further, summative procedures are conducted by student teachers at the conclusion of each unit, where summaries of learner performances on the pretest, posttest, and objective attainment information are recorded on Summary Evaluation of Unit forms. These self-evaluation experiences are consistent with the final component of the diagnostic-

prescriptive model of instruction.

Sample

Information from 44 secondary level student teachers and 4656 learners taught by the student teachers comprised the sample for this data base. These student teachers were supervised by one university supervisor, over the course of three semesters, i.e. Spring 1978 - 7 student teachers, Fall 1978 - 18 student teachers, Spring 1979 - 19 student teachers. The total number of secondary level student teachers numbered 184 during this period (Spring 78 - 68, Fall 78 - 64, Spring 79 - 52). The primary reason for selecting only the student teachers assigned to one university supervisor was to reduce error variance among supervisory ratings. The university supervisor has served in this role for three years and has established good relationships with classroom supervisors and building administrators in the student teaching sites represented in this project. Moreover, the supervisor is well versed on the diagnostic-prescriptive model of instruction on which the preparation program is based and has held the student teachers accountable for implementing the tenets of this model in their teaching.

Thirty classroom supervisors from 9 school buildings served as the "model teachers" for the student teachers. One supervisor in this group worked with a student teacher for each of the three semesters the data were collected, while ten other classroom supervisors served in this capacity for two semesters. Names of these individuals and the student teachers assigned to them are presented in a subsequent section of this report. In order to qualify as a classroom supervisor, these teachers met the following criteria: hold a valid teaching certificate in the field in which they are teaching, have completed 2 full years of public school teaching experience - one of which is in the local district, agree to serve as a classroom supervising teacher for both semesters, and agree to attend the inservice meetings sponsored by the Brazos Valley Cooperative Teacher Education Center and other meetings sponsored by the Department of Educational Curriculum and Instruction at Texas A&M University.

In order to enroll in student teaching each teaching candidate in this sample had met the following criteria:

1. Attained senior standing with at least 30 semester hours completed at TAMU including at least six semester hours in approved professional courses.

2. Attained a minimum grade point ratio (GPR) of 2.25 based on the grade report form published by the registrar's office of TAMU.

3. Completed at least 75% of the coursework required for the teaching fields with a minimum GPR of 2.25.

4. Admitted to the teacher education program at least one semester prior to student teaching. The criteria for this criterion include a statement of personal commitment, minimum grade point ratio (2.25), three letters of recommendations, successful completion of English proficiency examination, and *early field exp. course (*only required for EDCI majors).

5. Completed ten hours of professional education coursework (EPSY 301-3 hrs., EDCI 323-3hrs, EDCI 401-7 4 hrs.).

The learners in this sample were the pupils assigned to the classes of the 30 classroom supervisors during the three semester period these data were collected. These learners attended one of the following five rural school districts in Central Texas, namely:

Bryan	(A.D.A. = 8412)	Hearne	(A.D.A. = 1592)
Caldwell	(A.D.A. = 1303)	Navasota	(A.D.A. = 1937)
College Station	(A.D.A. = 2898)		

Information is presented in the file which will enable the learners to be grouped by student teacher, building site or school district if desired.

Instrumentation

A variety of scales and criterion-referenced instruments were used to yield information for this data base. One of these instruments, a rating scale entitled, Evaluation Profile was used to obtain instructional effectiveness ratings of the student teacher's performance. This instrument was completed on a biweekly basis by the university supervisor. The scale, consists of twenty-eight Likert type items divided into two catgories, i.e., instructional competencies

(21 items), and personal and professional competencies (7 items). Each item on the scale is referenced to a performance objective in the student teaching program. Further, the instructional skills addressed on this instrument are compatible with the skills and knowledges stressed in the diagnostic - prescriptive model of instruction, on which this program is based. The supervisor had the choice of marking one of five categories ranging from excellent = 1, to inadequate = 5. If the skill was not observed or not applicable to the classroom situation the supervisor had the option of marking N/A. An alpha coefficient, $\alpha = .94$, determined for this instrument suggests a high degree of internal consistency among responses to the various items.

A second rating scale, the Curriculum Context Checklist, was used to provide university supervisor ratings of the curricular units developed by the student teacher. Values from this scale provided data for the variable, planning effectiveness of the student teacher. This instrument contains a 5 choice scale identical to the scale of the evaluation profiles. Individual items of this instrument identify components of the curriculum unit, e.g., general goals, focusing generalizations, concept list, diagnostic component. In addition, student teachers completed two instruments which served self-evaluation functions and provided time ordered data for this data base. One of these instuments, the Weekly Reflection Sheet requested the student teacher to estimate the percent of time s/he spent during the preceding week observing, planning, assisting, team teaching, and/or assuming full responsibility. Further, the candidates assessed their morale and provided a numerical rating from 1 to 5 regarding their morale accompanied by a written explanation of the rating. These instruments were submitted to the university supervisor at the end of each week throughout the semester.

The second instrument, Summary Evaluation of Unit, was completed by the

teaching candidate immediately after completing the instruction associated with each unit. This form required an estimate of the achievement level and socio-economic level of the learners in addition to the actual number of class periods required to teach the unit. Perhaps the most significant information collected among all data, was recorded on this form by the student teacher. This data being achievement information (learner attainment of individual unit objectives, pretest scores, and unit posttest scores). Criterion-referenced tests developed by the student teacher were used to provide this learner attainment data. These instruments, unique for each unit and each student teacher, represent a strength and potential limitation in the design of this investigation. As a strength, the student teacher with guidance from classroom and university supervisors developed tests related directly to the outcomes established for the performance objectives in each unit. Prior learning, extenuating classroom situations, and the abilities of the learners were taken into account in establishing both the objectives and the corresponding criterion tests. Under these conditions, the cognitive attainment measure indeed did sample the behavior called for in the performance objective.

A potential limitation of candidate-developed criterion-referenced tests for this investigation stems primarily from the lack of information on the reliability and validity of the respective instruments. Conventional reliability procedures appropriate for norm-referenced tests were not determined on the various criterion-referenced tests because the function of these tests (to determine an examinee's level of functioning with respect to a stated criterion) is not consistent with the function of norm-referenced tests (determine an individual's performance with respect to the performance of others in the group) (Millman, 1974). Thus, while we are concerned, we are not unduly alarmed by the absence of these values. Validity of criterion-referenced instruments on the other hand, can be assessed by determining the logical relation of the performance objectives and the

individual test items. Fortunately, this validity check was conducted by the classroom and university supervisors on each candidate's test before the instrument was administered to the learners.

PERSONNEL

Data obtained from the student teachers and their learners in the sample were ordered, coded and placed in a data file by Sherrill Norris, Jim Tooke, and Tom Walker, graduate students in Educational Curriculum and Instruction, and Jon Denton, pricipal investigator of this project. Task schedules for each of these individuals were established to provide amanagement system for the project. The tireless efforts of the research assistants offset setbacks encountered in coding and keypunching the data enabling this project and two companion projects to be completed on schedule.

DENNOR

The data file resulting from this effort contains 369 variables with 331 being directly related to the student teacher and 38 variables associated with learners of the student teachers. These variables have been organized via the following data menu (AppendixA) and assigned a variable label. While the data are organized by card format, the data are stored in a disk pack on 142 tracks. In addition a backup set has been placed on the magnetic tape, 28771.

DATA ANALYSIS

This data file has been established to permit the individual learner to be the unit of analysis. Since the data are ordered by the identification number of the student teachers, the learner data may be combined and considered as data sets of student teachers. Since so many variables have been observed from the student teachers and learners in this sample, it is expected that some variables will not have values assigned to them from every student teacher or learner. Thus, the following tables (1 - 6) present descriptive statistics on each variable in the file.

Table 1

Descriptive Statististics for Variables on

Card 1 of DENNOR DATA SET

Var. label	Variable	N	$\bar{X}$	S.D.
IDT	Teacher #			
UN1	Unit Number			
GN1	General Goal	44	1.97	.63
FG1	Focusing Generalizations	44	2.73	1.02
CL1	Concept List	44	2.28	1.12
POKN1	# of Knowledge P.O.			
POKC1	Components of P.O.			
POSN1	#of Skill Obj. P.O.			
POSC1	Components of Skill Obj			
POAN1	# of Attitude Objectives			
POAC1	Components of Attitude Obj			
DIA1	Diagnosis	44	2.49	1.21
REM1	Remediation	44	3.68	1.45
CONO1	Content Outline	44	1.92	.95
IST1	Inst. Strategies	44	2.89	1.12
LM1	List of Materials	44	2.25	1.33
SUME1	Summative Evaluation	44	2.38	.95
FORM1	Formative Evaluation	44	2.79	1.29
SUBJ1	Subject Area			
UN2	Unit #2			
GN2	General Goal	44	2.04	.55
FG2	Focusing Generalization	44	2.78	1.14
CL2	Concept List	44	2.36	1.16
POKN2	# of knowledge P.O.			
POLC2	Components of P.O.			
POSN2	# of skill Obj.			
POSC2	Components of Skill Obj.			
POAN2	# of attitude obj			
POAC2	Components of Attitude Obj			
DIA2	Diagnosis (u2)	44	2.50	1.59
REM2	Remediation (u2)	44	3.36	1.83
CONO2	Content Outline	44	2.10	1.16
IST2	Instructional Straties	44	2.80	.99
LM2	List of Materials	44	2.23	1.36
SUME2	Summative Eval	44	2.37	.98
FORM2	Formative Eval	44	2.77	1.26
SUBJ2	Subj Matter 2nd Unit			
SEX	Sex of S.T.			
MAJ	Major of S.T.			
AGE	Age of S.T.			
USUP	UNIV. SUPERVISOR			
CSUP	Classroom Supervisor			
01	Card 1			

Table 2

Descriptive Statistics for Data on

Card 2 of DENNOR

Var. Label	Variable	N	X	S.D.
	Teacher number			
GR1	Grade Level of unit 1			
PER1	Number of instructional periods in Unit 1	44	11.67	4.55
PERL1	Length of period in minutes	44	54.30	4.57
EACL1	Estimated achievement level of students High=1, Middle=2, Low=3	44	2.17	1.34
SES1	Estimated Socio-Economic level of students Upper=1, Middle to Upper=2, Middle=3, Middle to Lower=4, Lower=5	44	3.12	1.25
GR2	Grade level of Unit 2	44	8.35	3.15
PER2	Number of instructional periods in Unit 2	44	9.48	9.75
PERL2	Length of period in minutes	44	51.62	12.22
EACL2	Estimated achievement level High=1, Middle=2, Low=3	44	2.49	2.05
SES2	Estimated SES Upper=1, Middle to Upper=2 Middle=3, Middle to Lower=4, Lower=5	44	3.47	1.97
OGPR	Overall Grade Point Ratio	39	2.95	.40
PEGPR	Prof. Ed. Grade Point Ratio	39	3.58	.37
TF1GPR	Teaching field 1 Grade Point Ratio	40	3.08	.33
TF2GPR	Teaching field 2 Grade Point Ratio	37	3.01	.41
SCH	School Name (site of Student Teaching Experience)			
EV1P	Evaluation Profile #1 = 1			
EV1P1	Univ Sup rating of use of lesson plan	32	2.24	1.02
EV1P2	Univ Sup rating of use of Per. Objective	32	2.46	1.30
EV1P3	Univ Sup rating of diagnostics used	32	.18	.58
EV1P4	Univ Sup rating of remediation procedures	32	.21	.69
EV1P5	Univ Sup rating of mastery of content	32	1.32	1.24
EV1P6	Univ Sup rating of duplication equipment	32	1.14	.99
EV1P7	Univ Sup rating of use of A-V equipment	32	.34	.86
EV1P8	Univ Sup rating of introduction & conclusion of lesson	30	2.31	1.13
EV1P9	Univ Sup rating of method of instruction	32	2.12	.94
EV1P10	Univ Sup rating of four types of Stimulus Presentation	32	2.10	.68
EV1P11	Univ Sup rating of use of attending behavior	31	2.19	1.16
EV1P12	Univ Sup rating to give clear directions	32	1.96	.91
EV1P13	Univ Sup rating of use of different levels of questions	32	1.55	1.32
EV1P14	Univ Sup rating of reinforcing techniques	32	2.20	.97
EV1P15	Univ Sup rating to clarify values	30	2.01	1.30
EV1P16	Univ Sup rating of classroom management	32	2.53	.91
EV1P17	Univ Sup rating of evaluation instrument	32	.18	.59
EV1P18	Univ Sup rating to evaluate inst. program	31	.90	1.37
EV1P19	Univ Sup rating of self-evaluation	31	.88	1.46
EV1P20	Univ Sup rating teaching a two week unit	32	.19	.67
EV1P21	Univ Sup rating model	32	1.77	.69
EV1P22	Univ Sup rating responsiblity	22	.90	.85
EV1P23	Univ Sup rating promptness	22	.76	.63
EV1P24	Univ Sup rating personal grooming	22	.95	.71
EV1P25	Univ Sup rating cooperation	22	.90	.57
EV1P26	Univ Sup rating acceptance of school norms	22	.95	.83
EV1P27	Univ Sup rating energy	22	1.02	1.07
EV1P28	Univ Sup rating concern for school	23	.93	.77

Table 3

Descriptive Statistics for Data on

Card 3 of DENNOR

Univ. Supervisor - Evaluation Profile - Ratings

Var. Label	Variable	N	$\bar{X}$	S.D.
	Teacher number			
EV2P	Evaluation Profile #2 = 2			
EV2P1	Univ Sup rating - lesson plan	33	2.12	.53
EV2P2	Univ Sup rating - per objective	33	2.34	.69
EV2P3	Univ Sup rating - diagnostics used	33	1.13	1.10
EV2P4	Univ Sup rating - remediation procedures	32	.50	.96
EV2P5	Univ Sup rating - mastery of content	33	1.86	.75
EV2P6	Univ Sup rating - duplication equipment	33	1.14	.71
EV2P7	Univ Sup rating - use of A-V equipment	33	.96	1.20
EV2P8	Univ Sup rating - introduction & conclusion of lesson	33	2.29	.90
EV2P9	Univ Sup rating - method of instruction	33	2.26	.79
EV2P10	Univ Sup rating - four types of stimulus presentation	33	1.97	.63
EV2P11	Univ Sup rating - use of attending behavior	33	2.49	.69
EV2P12	Univ Sup rating - to give clear directions	33	1.96	.66
EV2P13	Univ Sup rating - use different levels of questions	32	1.71	1.16
EV2P14	Univ Sup rating - of reinforcing techniques	33	2.33	.74
EV2P15	Univ Sup rating - to clarify values	33	2.36	1.04
EV2P16	Univ Sup rating - of classroom management	33	2.49	.55
EV2P17	Univ Sup rating - of evaluation instruments	33	1.56	1.03
EV2P18	Univ Sup rating - to evaluate inst. program	30	1.67	1.42
EV2P19	Univ Sup rating - of self evaluation	30	1.48	1.41
EV2P20	Univ Sup rating - teaching a 2 wk unit	33	.48	.92
EV2P21	Univ Sup rating - model	33	1.71	.68
EV2P22	Univ Sup rating - responsibility	17	.60	.63
EV2P23	Univ Sup rating - promptness	17	.66	.71
EV2P24	Univ Sup rating - personal grooming	17	.71	.70
EV2P25	Univ Sup rating - cooperation	18	.71	.57
EV2P26	Univ Sup rating - acceptance of schoolnorms	17	.73	.78
EV2P27	Univ Sup rating - energy	17	.81	.85
EV2P28	Univ Sup rating - concern for school	17	.63	.68
EV2P	Evaluation Profile #3 = 3			
EV3P1	Univ Sup rating - lesson plan	37	1.80	.81
EV3P2	Univ Sup rating - per. objective	37	2.19	.71
EV3P3	Univ Sup rating - diagnostics used	35	1.93	.79
EV3P5	Univ Sup rating - mastery of content	37	1.77	.62
EV3P4	Univ Sup rating - remediation procedures	36	1.59	.79
EV3P6	Univ Sup rating - duplication equipment	37	1.14	.60
EV3P7	Univ Sup rating - use of A-V equipment	37	1.33	1.08
EV3P8	Univ Sup rating - introduction & conclusion of lesson	37	1.94	.82

Table 3 cont'd

EV2P9	Univ Sup rating - method of instruction	37	2.12	.66
EV3P10	Univ Sup rating - four types of Stimulus presentation	37	1.72	.72
EV3P11	Univ Sup rating - use of attending behavior	37	2.32	.71
EV3P12	Univ Sup rating - to give clear directions	37	1.99	.67
EV3P13	Univ Sup rating - use different levels of questions	37	1.97	.90
EV3P14	Univ Sup rating - of reinforcing techniques	37	2.14	.67
EV3P15	Univ Sup rating - to clarify values	34	2.07	.83
EV3P16	Univ Sup rating - of classroom management	37	2.38	.62
EV3P17	Univ Sup rating - of evaluation instruments	36	1.73	.68
EV3P18	Univ Sup rating - to evaluate inst. program	37	1.99	.84
EV3P19	Univ Sup rating - of self evaluation	37	1.88	.95
EV3P20	Univ Sup rating - teaching a 2 wk unit	37	.25	.70
EV3P21	Univ Sup rating - model	37	1.49	.59
EV3P22	Univ Sup rating - responsibility	29	.84	.54
EV3P23	Univ Sup rating - promptness	29	.91	.62
EV3P24	Univ Sup rating - personal grooming	29	.88	.42
EV3P25	Univ Sup rating - cooperation	30	.92	.45
EV3P26	Univ Sup rating - acceptance of schoolnorms	29	.91	.55
EV3P27	Univ Sup rating - energy	29	.90	.60
EV3P28	Univ Sup rating - concern for school	28	.96	.67
EV3P1	Univ Sup rating - lesson plan	24	1.62	.68
EV4P2	Univ Sup rating - per objective	24	1.73	.77
EV4P3	Univ Sup rating - diagnostics used	23	1.60	.69
EV4P4	Univ Sup rating - remediation procedures	23	1.68	.75
EV4P5	Univ Sup rating - mastery of content	23	1.40	.49
EV4P6	Univ Sup rating - duplication equipment	23	1.11	.42
EV4P7	Univ Sup rating - use of A-V equipment	23	1.40	.73
EV4P8	Univ Sup rating - introduction & conclusion of lesson	23	2.11	.60
EV4P9	Univ Sup rating - method of instruction	23	1.63	.75
EV4P10	Univ Sup rating - four types of Stimulus Presentation	23	1.63	.67
EV4P11	Univ Sup rating - use of attending behavior	23	1.85	.73
EV4P12	Univ Sup rating - to give clear directions	23	1.78	.71
EV4P13	Univ Sup rating - use different levels of questions	23	1.59	.80
EV4P14	Univ Sup rating - of reinforcing techniques	23	1.89	.70
EV4P15	Univ Sup rating - to clarify values	28	1.62	.96

Table 4

Descriptive Statistics for Data on

Card 4 of DENNOR

University Supervisor - Evaluation Profile Ratings

Var. Label	Variable	N	$\bar{X}$	S.D.
	Teacher number			
EV4P16	Univ Sup rating - classroom management	23	1.97	.69
EV4P17	Univ Sup rating - evaluation instruments	23	1.56	.50
EV4P18	Univ Sup rating - evaluate inst. program	23	1.51	.90
EV4P19	Univ Sup rating - of self evaluation	21	1.47	.79
EV4P20	Univ Sup rating - teaching a 2 wk unit	22	.55	.67
EV4P21	Univ Sup rating - model	23	1.40	.49
EV4P22	Univ Sup rating - responsibility	21	1.01	.56
EV4P23	Univ Sup rating - promptness	21	.97	.52
EV4P24	Univ Sup rating - personal grooming	21	.95	.50
EV4P25	Univ Sup rating - cooperation	21	1.03	.57
EV4P26	Univ Sup rating - acceptance of school norms	21	.97	.52
EV4P27	Univ Sup rating - energy	21	1.01	.56
EV4P28	Univ Sup rating - concern for school	21	.94	.55
EV5P1	Univ Sup rating - lesson plan	30	1.27	.55
EV5P2	Univ Sup rating - per. objective	30	1.28	.50
EV5P3	Univ Sup rating - diagnostics used	30	1.01	.34
EV5P4	Univ Sup rating - remediation procedures	30	1.50	.59
EV5P5	Univ Sup rating - mastery of content	30	1.35	.47
EV5P6	Univ Sup rating - duplication equipment	30	.84	.44
EV5P7	Univ Sup rating - use of A-V equipment	30	.88	.66
EV5P8	Univ Sup rating - introduction & conclusion of lesson	30	1.73	.45
EV5P9	Univ Sup rating - method of instruction	30	1.35	.48
EV5P10	Univ Sup rating - four types of stimulus presentation	30	1.38	.63
EV5P11	Univ Sup rating - use of attending behavior	30	1.56	.72
EV5P12	Univ Sup rating - to give clear directions	30	1.27	.55
EV5P13	Univ Sup rating - use different levels of questions	30	1.60	.57
EV5P14	Univ Sup Rating - of reinforcing techniques	30	1.70	.59
EV5P15	Univ Sup rating - to clarify values	30	1.97	.49
EV5P16	Univ Sup rating - of classroom management	30	1.87	.63
EV5P17	Univ Sup rating - of evaluation instruments	30	1.13	.34
EV5P18	Univ Sup rating - to evaluate inst. program	30	1.39	.56
EV5P19	Univ Sup rating - of self evaluation	30	1.41	.63
EV5P20	Univ Sup rating - teaching a 2 wk unit	30	1.03	.36
EV5P21	Univ Sup rating - model	30	1.18	.39
EV5P22	Univ Sup rating - responsibility	18	.64	.48
EV5P23	Univ Sup rating - promptness	18	.60	.49
EV5P24	Univ Sup rating - personal grooming	18	.69	.57
EV5P25	Univ Sup rating - cooperation	18	.64	.48
EV5P26	Univ Sup rating - acceptance of school norms	18	.64	.48
EV5P27	Univ Sup rating - energy	18	.68	.55
EV5P28	Univ Sup rating - concern for school	18	.74	.84
EV6P	Evaluation Profile #6			

Table 4 cont'd

EV6P1	Univ Sup rating - lesson plan	41	1.32	.84
EV6P2	Univ Sup rating - per objective	41	1.36	.48
EV6P3	Univ Sup rating - diagnostics used	41	1.42	.49
EV6P4	Univ Sup rating - remediation procedures	41	1.43	.60
EV5P5	Univ Sup rating - master of content	41	1.18	.40
EV6P6	Univ Sup rating - duplication equipment	41	1.06	.36
EV6P7	Univ Sup rating - use of A-V equipment	41	1.11	.48
EV5P8	Univ Sup rating - introduction & conclusions of lessons	41	1.43	.56
EV6P9	Univ Sup rating - method of instruction	41	1.23	.42
EV6P10	Univ Sup rating - four types of stimulus presentations	41	1.22	.42
EV6P11	Univ Sup rating - use of attending behavior	41	1.22	.46
EV6P12	Univ Sup rating - to give clear directions	41	1.22	.46
EV6P13	Univ Sup rating - use different levels of questions	41	1.46	.56
EV6P14	Univ Sup rating - of reinforcing techniques	41	1.56	.55
EV6P15	Univ Sup rating - to clarify values	41	1.58	.55
EV6P16	Univ Sup rating - of classroom management	41	1.73	.63
EV6P17	Univ Sup rating - of evaluation instruments	41	1.12	.33
EV6P18	Univ Sup rating - to evaluate inst. program	41	1.24	.43
EV6P19	Univ Sup rating - of self evaluation	40	1.24	.43
EV6P20	Univ Sup rating - teaching a 2 wk unit	41	1.00	.00
EV6P21	Univ Sup rating - model	41	1.19	.40
EV6P22	Univ Sup rating - responsibility	41	1.09	.29
EV6P23	Univ Sup rating - promptness	41	1.08	.28
EV6P24	Univ Sup rating - personal grooming	41	1.08	.27
EV6P25	Univ Sup rating - cooperation	41	1.07	.26
EV6P26	Univ Sup rating - acceptance of schoolnorm	41	1.00	.00
EV6P27	Univ Sup rating - energy	41	1.27	.33
EV6P28	Univ Sup rating - concern for school	39	1.03	.17

Table 5

Descriptive Statistics for Data on

Card 5 of DENNOR

Weekly S.T. Schedule

Var. Label	Variable	N	$\bar{X}$	S.D.
	Teacher #			
TIA1	Wk1 - Time - % Introd. Activity			
TP1	wk1 - Time - % Planning			
TPA1	wk1 - Time - % Assisting			
TTT1	wk1 - Time - % Team Teaching			
TFR1	wk1 - Time - % Full Responsibility			
TSE1	wk1 - Time % 2nd Environment			
MR1	wk1 - Morale Rating	36	3.98	.80
TIA2	wk2 - Time - % Introd. Activity			
TP2	wk2 - Time - % Planning			
TPA2	wk2 - Time - % Assisting			
TTT2	wk2 - Time - % Team Teaching			
TFR2	wk2 - Time - % Full Responsibility			
TSE2	wk2 - Time - % 2nd Environment			
MR2	wk2 - Morale Rating	38	4.06	.98
TIA3	wk3 - Time - % Introd. Activity			
TP3	wk3 - Time - % Planning			
TPA3	wk3 - Time - % Assisting			
TTT3	wk3 - Time - % Team Teaching			
TFR3	wk3 - Time - % Full Responsibility			
TSE3	wk3 - Time - % 2nd Environment			
MR3	wk3 - Morale Rating	36	3.76	1.02
TIA4	wk4 - Time - % Introd. Activity			
TP4	wk3 - Time - % Planning			
TPA4	wk4 - Time - % Assisting			
TTT4	wk4 - Time - % Team Teaching			
TFR4	wk4 - Time - % Full Responsibility			
TSE4	wk4 - Time - % 2nd Environment			
MR4	wk4 - Morale Rating	39	3.84	1.04
TIA5	wk5 - Time - % Introd. Activity			
TP5	wk5 - Time - % Planning			
TPA5	wk5 - Time - % Assisting			
TTT5	wk5 - Time - % Team Teaching			
TFR5	wk5 - Time - % Full Responsibility			
TSE4	wk5 - Time - % 2nd Environment			
MR5	wk5 - Morale Rating	38	3.63	1.07
TIA6	wk6 - Time - % Introd. Activity			
TP6	Wk6 - Time - % Planning			
TPA6	wk6 - Time - % Assisting			
TTT6	wk6 - Time - % Team Teaching			
TFR6	wk6 - Time - % Full Responsibility			
TSE6	wk6 - Time - % 2nd Environment			
MR6	wk6 - Morale Rating	34	3.82	.86
TIA7	wk7 - Time - % Introd. Activity			
TP7	wk7 - Time - % Planning			
TPA7	wk7 - Time - % Assisting			
TTT7	wk7 - Time - % Team Teaching			
TFR7	wk7 - Time - % Full Responsibility			
TSE7	wk7 - Time - % 2nd Environment			

Table 5 cont'd

MR7	wk7 - Morale Rating			
TIA8	wk8 - Time - % Introd. Activity	39	3.95	.90
TP8	wk8 - Time - % Planning			
TPA8	wk9 - Time - % Assisting			
TTT8	wl8 - Time - % Team Teaching			
TFR8	wk8 - Time - % Full Responsibility			
TSE8	wk8 - Time - % 2nd Environment			
MR8	wk8 - Morale Rating	36	3.99	.82
TIA9	wk9 - Time - % Introd. Activity			
TP9	wk9 - Time - % Planning			
TPA9	wk9 - Time - % Assisting			
TTT9	wk9 - Time - % Team Teaching			
TFR9	wk9 - Time - % Full Responsibility			
TSE9	wk9 - Time - % 2nd Environment			
MR9	wk10- Morale Rating	37	4.06	.80
TIA	wk10- Time - % Introd. Activity			
TP10	wk10- Time - % Planning			
TPA10	wk10- Time - % Assisting			
TTT10	wk10- Time - % Team Teaching			
TFR10	wk10- Time - % Full Responsibility			
TSE10	wk10- Time - % 2nd Environment			
MR10	wk10- Morale Rating	32	4.13	.71
TIA11	wk11- Time - % Intro. Activity			
TP11	wk11- Time - % Planning			
TPA11	wk11- Time - % Assisting			
TTT11	wk11- Time - % Team Teaching			
TFR11	wk11- Time - % Full Responsibility			
TSE11	wk11- Time - % 2nd Environment			
MR11	wk11- Morale Rating	32	4.03	.82
TIA12	wk12- Time - % Intro. Activity			
TP12	wk12- Time - % Planning			
TPA12	wk12- Time - % Assisting			
TTT12	wk12- Time - % Team Teaching			
TFR12	wk12- Time - % Full Responsibility			
TSE12	wk12- Time - % 2nd Environment			
MR12	wk12- Morale Rating	29	4.33	.78
TIA13	wk13- Time - % Intro. Activity			
TP13	wk13- Time - % Planning			
TPA13	wk13- Time - % Assisting			
TTT13	wk13- Time - % Team Teaching			
TFR13	wk13- Time - % Full Responsibility			
TSE13	wk13- Time - % 2nd Environment			
MR13	wk13- Morale Rating	27	4.64	.48
TIA14	wk14- Time - % Intro. Activity			
TP14	wk14- Time - % Planning			
TPA14	wk14- Time - % Assisting			
TTT14	wk14- Time - % Team Teaching			
TFR14	wk14- Time - % Full Responsibility			
TSE14	wk14- Time - % 2nd Environment			
MR14	wk13- Morale Rating	18	4.40	.90
TIA15	wk15- Time - % Intro. Activity			
TP15	wk15- Time - % Planning			
TPA15	wk15- Time - % Assisting			
TTT15	wk15- Time - % Team Teaching			
TFR15	wk15- Time - % Full Responsibility			
TSE15	wk15- Time - % 2nd Environment			
MR15	wk15- Morale Rating	12	4.48	.68

Values for the Time based variables were not included because missing values were not excluded from calculations.

Table 6

Descriptive Statistics for

Card 7 of DENNOR

Performance Data on Individual Learners

Var. Label	Variable	N	$\bar{X}$	S.D.
	Teacher #			
LID	Learner ID			
PRE1	PRETEST SCORE UNIT 1 (Raw Score)	3157	29.78	24.35
OB1	UNIT 1 - Objective 1	3861	.69	.46
OB2	UNIT 1 - OBJECTIVE 2	3846	.67	.47
OB3	UNIT 1 - OBJECTIVE 3	3843	.64	.48
OB4	UNIT 1 - OBJECTIVE 4	3733	.65	.48
OB5	UNIT 1 - OBJECTIVE 5	3728	.65	.48
OB6	UNIT 1 - OBJECTIVE 6	3146	.60	.49
OB7	UNIT 1 - OBJECTIVE 7	2657	.71	.45
OB8	UNIT 1 - OBJECTIVE 8	2192	.69	.46
OB9	UNIT 1 - OBJECTIVE 9	1625	.65	.48
OB10	UNIT 1 - OBJECTIVE 10	1198	.61	.49
OB11	UNIT 1 - OBJECTIVE 11	851	.80	.40
OB12	UNIT 1 - OBJECTIVE 12	611	.66	.47
OB13	UNIT 1 - OBJECTIVE 13	600	.61	.49
OB14	UNIT 1 - OBJECTIVE 14	522	.67	.47
OB15	UNIT 1 - OBJECTIVE 15	292	.50	.50
POST1	POSTTEST SCORE (RAW) UNIT 1	3831	62.34	33.08
NOB1	Number of objectives - Unit 1	4656	7.24	4.45
PERACH1	% of total obj. achieved by learner Unit 1	3870	66.14	28.62
PRE2	PRETEST SCORE Unit 2 (Raw Score)	2890	33.10	29.62
OBJ1	UNIT 2 - OBJECTIVE 1	3630	.71	.46
OBJ2	UNIT 2 - OBJECTIVE 2	3632	.67	.47
OBJ3	UNIT 2 - OBJECTIVE 3	3630	.66	.47
OBJ4	UNIT 2 - OBJECTIVE 4	3347	.63	.48
OBJ5	UNIT 2 - OBJECTIVE 5	2990	.63	.48
OBJ6	UNIT 2 - OBJECTIVE 6	2589	.60	.50
OBJ7	UNIT 2 - OBJECTIVE 7	2121	.73	.44
OBJ8	UNIT 2 - OBJECTIVE 8	1600	.74	.44
OBJ9	UNIT 2 - OBJECTIVE 9	1284	.65	.48
OBJ10	UNIT 2 - OBJECTIVE 10	822	.66	.47
OBJ11	UNIT 2 - OBJECTIVE 11	563	.55	.50
OBJ12	UNIT 2 - OBJECTIVE 12	451	.40	.49
OBJ13	UNIT 2 - OBJECTIVE 13	345	.72	.45
OBJ14	UNIT 2 - OBJECTIVE 14	271	.31	.46
OBJ15	UNIT 2 - OBJECTIVE 15	197	.30	.46
POST2	POSTTEST SCORE (RAW) UNIT 2	3517	59.52	27.30
NOB2	Number of Objectives - Unit 2	4656	6.15	4.27
PERACH2	% of Total obj achieved by learner Unit 2	3633	63.73	30.55

At first glance these tabular summaries are overwhelming because of the sheer volume of numbers, symbols and labels. However if one scans the figures looking for trends and stability across the variables, patterns begin to appear. For example, in table 1 the Supervisor ratings for the unit 1 components are generally better (lower numerical values) than their analogues in unit 2. Additionally, one may note the number of learners taught by the student teachers ranged from 23 to 170, with the mean value being 107.

Tables 2-4 provide summaries of the six classroom observations ratings of the university supervisor gleaned from the Evaluation Profile instrument. One finding from the 168 summaries provided in these tables is the variation in the number of observations across these samples. The initial observation EV1P contained information from 32 student teachers, while subsequent observations fluctuated, i.e., EV2P-33, EV3P-37, EV4P-23, EV5P-30, EV6P-41. One reason for this variation across observations is that data collection procedures during the Spring 1978 semester yielded values for only the EV3P and EV6P clusters of variables. Additionally, the measures of central tendency for the individual variables contained in tables 2-4 illustrate marked improvement of the student teachers instructional skills in some instances. To illustrate this observation consider the mean values for the variable, university supervisor rating of classroom management, across the six observations: EV1P16-2.53, EV2P16-2.49, EV3P16-2.38, EV4P16-1.97, EV5P16-1.87, EV6P16-1.73. Recalling that the lower the numerical value the better the rating, one can see gradual improvement over the course of the student teaching semester with respect to the instructional skills related to classroom management. Directing our attention to table 5, we find numerical values for weekly morale ratings for student teachers. Note the trend from the beginning of the semester through the final week of student teaching is upward (higher value-higher morale). The mid-semester slump of student teacher morale

is a well-documented phenomenon which appears in table 5 as slightly lower mean values for the variables MR3 through MR6.

Finally, table 6 provides summaries of performances of individual learners of the student teachers. For this reason the magnitude of the number of observations in this table is roughly 100 times greater than the N's in tables 1-5. One casual observation regarding the mean values appearing in table 6 is the observed level of objective attainment, which is .65±.05. Stated another way, the average percentage of learners attaining any objective in the initial instructional unit fell between 60 and 70 across all student teachers. This observation nearly holds for the second unit performances as well. Further, it is interesting and perhaps puzzling that cognitive attainment of learners measured in terms of the number of objectives attained (PERACH1 and PERACH2) dropped from 66.14 in unit 1 to 63.73 in unit 2. These observations only brush the surface of the information contained in this data set, and the reader is encouraged to examine the values in tables 1-6 for the purpose of generating questions.

CONCLUDING REMARKS

The intent of this paper has been to provide a general description of both the secondary teacher preparation program in EDCI and the extensive data set, DENNOR. For this reason, much has been made about the model of instruction which our program embraces and the student teaching experience our candidates complete. It is hoped the background information has provided a context from which to examine the data summaries in tables 1-6. Moreover, given this context and the data summaries, perhaps a number of questions come to mind, which can be answered by analyzing and probing the data set. The research group on teacher education within the department has previewed the data summaries and have raised the following questions:

(1) Do learners of EDCI majors attain more than learners of non-majors in EDCI?

(2) Is the cognitive attainment of learners markedly different across different student teachers?

(3) Is there a relation between instructional time on task by student teachers and their morale rating for the week?

(4) How valid are supervisory ratings for predicting the ability of student teachers to positively influence cognitive attainment among their learners?

(5) Can the diagnostic-prescriptive model of instruction be empirically validated given the DENNOR data set?

(6) Do academic characteristics of the teaching candidate affect teacher candidate behavior to the extent discernible differences in learner performance result?

(7) What influence does supervisory observations have on teacher candidate morale and subsequent classroom performance?

(8) Is there a qualitative and quantitative difference in the instruction provided across the two units by the student teacher?

(9) Are student teachers equally effective in producing cognitive growth among their learners?

(10) Do classroom supervisors influence the teaching behavior of student teachers sufficiently to bring about variation in cognitive attainment among learners?

These questions represent only a small portion of the issues we have begun to think about and explore. As colleagues, we encourage your participation in the research group on teacher education and solicit your thoughts and analyses of the data in DENNOR. This data set isn't the exclusive property of Denton or Norris, it belongs to the research laboratory on instruction. Therefore as participants in the laboratory you have every right to analyze the data and report your findings. The only obligation attached is that an acknowledgement be made that University Research Funds - Texas A&M University were used in conducting the research.

References

Armstrong, D. G.; Denton, J. J.; Savage, T. V. Instructional skills handbook. Englewood Cliffs, New Jersey, Educational Technology Publications, 1978.

Denemark, G. S., & Macdonald, J. B. Preservice and inservice education of teachers. Review of Educational Research, 1967, 37, 233-247.

Millman, J. Criterion-referenced measurement. In W. J. Popham (Ed.) Evaluation in education: current applications, Berkeley McCutchan Publishing Co., 1974, 311-397.

Peck, R. F., & Tucker, J. A. Research on teacher education. In R. M. W. Travers (Ed.), Second handbook of research in teaching. Chicago: Rand McNally College Publishing Co., 1973.

APPENDIX A

DENNOR DATA SET

Card 1

Rating of Units by Univ. Supervisor

Card Column	Var.label	Variable	Coding Convention
Col 1-2	IDT	Teacher #	
Col 3	UN1	Unit Number	high low
Col 4	GN1	General Goal	1 - 5 0=N/A
Col 5	FG1	Focusing Generalizations	1 - 5 0=N/A
Col 6	CL1	Concept List	1 - 5 0=N/A
Col 8-9	POKN1	# of Knowledge P.O.	
Col 10-13	POKC1	Components of P.O.	A B C D
Col 15-16	POSN1	# of Skill Obj. P.O. (Application-Evaluation)	
Col 17-20	POSC1	Components of Skill Obj	A B C D
Col 22-23	POAN1	# of Attitude Objectives	
Col 24-27	POAC1	Components of Attitude Obj	A B C D
Col 28	DIA1	Diagnosis	1 - 5 0=N/A
Col 29	REM1	Remediation	1 - 5
Col 30	CONO1	Content Outline	1 - 5
Col 31	IST1	Inst. Strategies	1 - 5
Col 32	LM1	List of Materials	1 - 5
Col 33	SUME1	Summative Eval	1 - 5
Col 34	FORM1	Formative Eval	1 - 5
Col 35-37	SUBJ1	Subject Area-1st unit	Soc, Sci, Mat, Eng.
Col 38	UN2	Unit #2	2
Col 39	GN2	General Goal	1 - 5
Col 40	FG2	Focusing Generalizations	1 - 5
Col 41	CL2	Concept List	1 - 5
Col 42-43	POKN2	# of Knowledge P.O.	
Col 44-47	POKC2	Components of P.O.	A B C D
Col 48-49	POSN2	#of Skill Obj.	
Col 50-53	POSC2	Components of Skill Obj.	A B C D
Col 54	POAN2	# of Attitude obj	
Col 55-58	POAC2	Components of Attitude Obj	A B C D
Col 59	DIA2	Diagnosis	1 - 5
Col 60	REM2	Remediation	1 - 5
Col 61	CONO2	Content Outline	1 - 5
Col 62	IST2	Inst. Strategies	1 - 5
Col 63	LM2	List of Materials	1 - 5
Col 64	SUME2	Summative Eval	1 - 5
Col 65	FORM2	Formative Eval	1 - 5
Col 66-68	SUBJ2	Subj Area-2nd unit	
Col 69	SEX	Sex of S.T.	male=1, female=2
Col 70	MAJ	Major of S.T.	EDCI=1, NON-EDCI=2
Col 71-72	AGE	Age of S.T.	
Col 73-74	USUP	UNIV. SUPERVISOR	01 - Norris S.
Col 75-77	CSUP	Classroom Supervisor	
Col 79-80	01	Card 1	

Card 2

Summary of Units by Student Teacher and Univ. Supervisor - Evaluation Profile Ratings

Card Column	Var. Label	Variable	Coding Convention
Col 1-2		Teacher number	
Col 3-4	GR1	Grade level of unit 1	
Col 5-6	PER1	Number of instructional periods in Unit 1	
Col 7-9	PERL1	Length of period in minutes	
Col 10	EACL1	Estimated achievement level of students High=1, Middle=2, Low=3	
Col 11	SES1	Estimated Socio-Economic level of students Upper=1, Middle to Upper=2, Middle=3, Middle to Lower=4, Lower=5	
Col 12-13	GR2	Grade level of Unit 2	
Col 14-15	PER2	Number of instructional periods in Unit 2	
Col 16-18	PERL2	Length of period in minutes	
Col 19	EACL2	Estimated achievement level High=1, Middle=2, Low=3	
Col 20	SES2	Estimated SES Upper=1, Middle to Upper=2 Middle=3, Middle to Lower=4, Lower=5	
Col 21-24	OGPR	Overall Grade Point Ratio	
Col 25-28	PEGPR	Prof. Ed. Grade Point Ratio	
Col 29-32	TF1GPR	Teaching field 1 Grade Point Ratio	
Col 33-36	TF2GPR	Teaching field 2 Grade Point Ratio	
Col 37-50	SCH	School Name (site of Student Teaching Experience) *	
Col 51	EV1P	Evaluation Profile #1 = 1	
Col 52	EV1P1	Univ Sup rating of use of lesson plan	1 - 5
Col 53	EV1P2	Univ Sup rating of use of Per. Objective	1 - 5
Col 54	EV1P3	Univ Sup rating of diagnostics used	1 - 5
Col 55	EV1P4	Univ Sup rating of remediation procedures	1 - 5
Col 56	EV1P5	Univ Sup rating of mastery ofcontent	1 - 5
Col 57	EV1P6	Univ Sup rating of duplication equipment	1 - 5
Col 58	EV1P7	Univ Sup rating of use of A-V equipment	1 - 5
Col 59	EV1P8	Univ Sup rating of introduction & conclusion of lesson	1 - 5
Col 60	EV1P9	Univ Sup rating of method of instruction	1 - 5
Col 61	EV1P10	Univ Sup rating of four types of Stimulus presentation	1 - 5
Col 62	EV1P11	Univ Sup rating of use of attending behavior	1 - 5
Col 63	EV1P12	Univ Sup rating to give clear directions	1 - 5
Col 64	EV1P13	Univ Sup rating of use different levels of questions	1 - 5
Col 65	EV1P14	Univ Sup rating of reinforcing techniques	1 - 5
Col 66	EV1P15	Univ Sup rating to clarify values	1 - 5
Col 67	EV1P16	Univ Sup rating of classroom management	1 - 5
Col 68	EV1P17	Univ Sup rating of evaluation instrument	1 - 5
Col 69	EV1P18	Univ Sup rating to evaluate inst. program	1 - 5
Col 70	EV1P19	Univ Sup rating of self-evaluation	1 - 5
Col 71	EV1P20	Univ Sup rating teaching a two week unit	1 - 5
Col 72	EV1P21	Univ Sup rating model	1 - 5
Col 73	EV1P22	Univ Sup rating responsibility	1 - 5
Col 74	EV1P23	Univ Sup rating promptness	1 - 5
Col 75	EV1P24	Univ Sup rating personal groom	1 - 5
Col 76	EV1P25	Univ Sup rating cooperation	1 - 5
Col 77	EV1P26	Univ Sup rating acceptance of school norms	1 - 5
Col 78	EV1P27	Univ Sup rating energy	1 - 5
Col 79	EV1P28	Univ Sup rating concern for school	1 - 5
Col 80		Card 2	

*SCH - CODE

CARD 2 (continued)

```
A  M  H  I  G - - - - - A&M High
A  M  M  I  D - - - - - A&M Middle
B  R  Y  A  N - - - - - Bryan High
S  F  A  U  S - - - - - S.F. Austin
H  E  A  R  N - - - - - Hearne High
N  A  V  H  I - - - - - Navasota High
N  A  V  M  D - - - - - Navasota Middle
C  A  L  H  I - - - - - Caldwell High
C  A  L  J  R - - - - - Caldwell Junior
```

Card 3

Univ. Supervisor - Evaluation Profile - Ratings (cont)

Card Column	Var. Label	Variable	Coding Convention
Col 1-2		Teacher number	
Col 4	EV2P	Evaluation Profile #2 = 2	high low
Col 5	EV2P1	Univ Sup rating - lesson plan	1 - 5
Col 6	EV2P2	Univ Sup rating - per. objective	1 - 5
Col 7	EV2P3	Univ Sup rating - diagnostics used	1 - 5
Col 8	EV2P4	Univ Sup rating - remediation procedures	1 - 5
Col 9	EV2P5	Univ Sup rating - master of content	1 - 5
Col 10	EV2P6	Univ Sup rating - duplication equipment	1 - 5
Col 11	EV2P7	Univ Sup rating - use of A-V equipment	1 - 5
Col 12	EV2P8	Univ Sup rating - introduction & conclusion of lesson	1 - 5
Col 13	EV2P9	Univ Sup rating - method of instruction	1 - 5
Col 14	EV2P10	Univ Sup rating - four types of Stimulus presentation	
Col 15	EV2P11	Univ Sup rating - use of attending behavior	1 - 5
Col 16	EV2P12	Univ Sup rating - to give clear directions	1 - 5
Col 17	EV2P13	Univ Sup rating - use different levels of questions	1 - 5
Col 18	EV2P14	Univ Sup rating - of reinforcing techniques	
Col 19	EV2P15	Univ Sup rating - to clarify values	1 - 5
Col 20	EV2P16	Univ Sup rating - of classroom management	1 - 5
Col 21	EV2P17	Univ Sup rating - of evaluation instruments	1 - 5
Col 22	EV2P18	Univ Sup rating - to evaluate inst. program	1 - 5
Col 23	EV2P19	Univ Sup rating - of self evaluation	1 - 5
Col 24	EV2P20	Univ Sup rating - teaching a 2 wk unit	1 - 5
Col 25	EV2P21	Univ Sup rating - model	1 - 5
Col 26	EV2P22	Univ Sup rating - responsibility	1 - 5
Col 27	EV2P23	Univ Sup rating - promptness	1 - 5
Col 28	EV2P24	Univ Sup rating - personal grooming	1 - 5
Col 29	EV2P25	Univ Sup rating - cooperation	1 - 5
Col 30	EV2P26	Univ Sup rating - acceptance of schoolnorms	1 - 5
Col 31	EV2P27	Univ Sup rating - energy	1 - 5
Col 32	EV2P28	Univ Sup rating - concern for school	1 - 5
Col 34	EV2P	Evaluation Profile #3 = 3	
Col 35	EV3P1	Univ Sup rating - lesson plan	1 - 5
Col 36	EV3P2	Univ Sup rating - per. objective	1 - 5
Col 37	EV3P3	Univ Sup rating - diagnostics used	1 - 5
Col 38	EV3P4	Univ Sup rating - remediation procedures	1 - 5
Col 39	EV3P5	Univ Sup rating - mastery of content	1 - 5
Col 40	EV3P6	Univ Sup rating - duplication equipment	1 - 5
Col 41	EV3P7	Univ Sup rating - use of A-V equipment	1 - 5
Col 42	EV3P8	Univ Sup rating - introduction & conclusion of lesson	1 - 5

Card 3 cont'd

Col 43	EV3P9	Univ Sup rating - method of instruction	1 - 5
Col 44	EV3P10	Univ Sup rating - four types of Stimulus presentation	1 - 5
Col 45	EV3P11	Univ Sup rating - use of attending behavior	1 - 5
Col 46	EV3P12	Univ Sup rating - to give clear directions	1 - 5
Col 47	EV3P13	Univ Sup rating - use different levels of questions	1 - 5
Col 48	EV3P14	Univ Sup rating - of reinforcing techniques	1 - 5
Col 49	EV3P15	Univ Sup rating - to clarify values	1 - 5
Col 50	EV3P16	Univ Sup rating - of classroom management	1 - 5
Col 51	EV3P17	Univ Sup rating - of evaluation instruments	1 - 5
Col 52	EV3P18	Univ Sup rating - to evaluate inst. program	1 - 5
Col 53	EV3P19	Univ Sup rating - of self evaluation	1 - 5
Col 54	EV3P20	Univ Sup rating - teaching a 2 wk unit	1 - 5
Col 55	EV3P21	Univ Sup rating - model	1 - 5
Col 56	EV3P22	Univ Sup rating - responsibility	1 - 5
Col 57	EV3P23	Univ Sup rating - promptness	1 - 5
Col 58	EV3P24	Univ Sup rating - personal grooming	1 - 5
Col 59	EV3P25	Univ Sup rating - cooperation	1 - 5
Col 60	EV3P26	Univ Sup rating - acceptance of schoolnorms	1 - 5
Col 61	EV3P27	Univ Sup rating - energy	1 - 5
Col 62	EV3P28	Univ Sup rating - concern for school	1 - 5
Col 64	EV4P	Evaluation Profile #4 = 4	
Col 65	EV4P1	Univ Sup rating - lesson plan	1 - 5
Col 66	EV4P2	Univ Sup rating - per objective	1 - 5
Col 67	EV4P3	Univ Sup rating - diagnostics used	1 - 5
Col 68	EV4P2	Univ Sup rating - remediation procedures	1 - 5
Col 69	EV4P5	Univ Sup rating - mastery of content	1 - 5
Col 70	EV4P6	Univ Sup rating - duplication equipment	1 - 5
Col 71	EV4P7	Univ Sup rating - use of A-V equipment	1 - 5
Col 72	EV4P8	Univ Sup rating - introduction & conclusion of lesson	1 - 5
Col 73	EV4P9	Univ Sup rating - method of instruction	1 - 5
Col 74	EV4P10	Univ Sup rating - four types of Stimulus presentation	1 - 5
Col 75	EV4P11	Univ Sup rating - use of attending behavior	1 - 5
Col 76	EV4P12	Univ Sup rating - to give clear directions	1 - 5
Col 77	EV4P13	Univ Sup rating - use different levels of questions	1 - 5
Col 78	EV4P14	Univ Sup rating - of reinforcing techniques	1 - 5
Col 79	EV4P15	Univ Sup rating - to clarify values	1 - 5
Col 80		Card 3	

Card 4

Weekly S.T. Schedule

Card Column	Var. Label	Variable	Coding Conventic
Col 1-2		Teacher number	
Col 4	EV4P16	Univ Sup rating - classroom management	1 - 5
Col 5	EV4P17	Univ Sup rating - evaluation instruments	1 - 5
Col 6	EV4P18	Univ Sup rating - evaluate inst. program	1 - 5
Col 7	EV4P19	Univ Sup rating - of self evaluation	1 - 5
Col 8	EV4P20	Univ Sup rating - teaching a 2 wk unit	1 - 5
Col 9	EV4P21	Univ Sup rating - model	1 - 5
Col 10	EV4P22	Univ Sup rating - responsibility	1 - 5
Col 11	EV4P23	Univ Sup rating - promptness	1 - 5
Col 12	EV4P24	Univ Sup rating - personal grooming	1 - 5
Col 13	EV4P25	Univ Sup rating - cooperation	1 - 5
Col 14	EV4P26	Univ Sup rating - acceptance of school norms	1 - 5
Col 15	EV4P27	Univ Sup rating - energy	1 - 5
Col 16	EV4P28	Univ Sup rating - concern for school	1 - 5
	EV5P	Evaluation Profile #5	
Col 17	EV5P1	Univ Sup rating - lesson plan	1 - 5
Col 18	EV5P2	Univ Sup rating - per. objective	
Col 19	EV5P3	Univ Sup rating - diagnostics used	1 - 5
Col 20	EV5P4	Univ Sup rating - remediation procedures	1 - 5
Col 21	EV5P5	Univ Sup rating - mastery of content	1 - 5
Col 22	EV5P6	Univ Sup rating - duplication equipment	1 - 5
Col 23	EV5P7	Univ Sup rating - use of A-V equipment	1 - 5
Col 24	EV5P8	Univ Sup rating - introduction & conclusion of lesson	1 - 5
Col 25	EV5P9	Univ Sup rating - method of instruction	1 - 5
Col 26	EV5P10	Univ Sup rating - four types of stimulus presentation	1 - 5
Col 27	EV5P11	Univ Sup rating - use of attending behavior	1 - 5
Col 28	EV5P12	Univ Sup rating - to give clear directions	1 - 5
Col 29	EV5P13	Univ Sup rating - use different levels of questions	1 - 5
Col 30	EV5P14	Univ Sup rating - of reinforcing techniques	1 - 5
Col 31	EV5P15	Univ Sup rating - to clarify values	1 - 5
Col 32	EV5P16	Univ Sup rating - of classroom management	1 - 5
Col 33	EV5P17	Univ Sup rating - of evaluation instruments	1 - 5
Col 34	EV5P18	Univ Sup rating - to evaluate inst. program	1 - 5
Col 35	EV5P19	Univ Sup rating - of self evaluation	1 - 5
Col 36	EV5P20	Univ Sup rating - teaching a 2 wk unit	1 - 5
Col 37	EV5P21	Univ Sup rating - model	1 - 5
Col 38	EV5P22	Univ Sup rating - responsibility	1 - 5
Col 39	EV5P23	Univ Sup rating - promptness	1 - 5
Col 40	EV5P24	Univ Sup rating - personal grooming	1 - 5
Col 41	EV5P25	Univ Sup rating - cooperation	1 - 5
Col 42	EV5P26	Univ Sup rating - acceptance of school norms	1 - 5
Col 43	EV5P27	Univ Sup rating - energy	1 - 5
Col 44	EV5P28	Univ Sup rating - concern for school	1 - 5

Col 45	EV6P	Evaluation Profile #6	
Col 46	EV6P1	Univ Sup rating - lesson plan	1 - 5
Col 47	EV6P2	Univ Sup rating - per objective	1 - 5
Col 48	EV6P3	Univ Sup rating - diagnostics used	1 - 5
Col 49	EV6P4	Univ Sup rating - remediation procedures	1 - 5
Col 50	EV6P5	Univ Sup rating - master of content	1 - 5
Col 51	EV6P6	Univ Sup rating - duplication equipment	1 - 5
Col 52	EV6P7	Univ Sup rating - use of A-V equipment	1 - 5
Col 53	EV6P8	Univ Sup rating - introduction & conclusion of lessons	1 - 5
Col 54	EV6P9	Univ Sup rating - method of instruction	1 - 5
Col 55	EV6P10	Univ Sup rating - four types of stimulus presentations	1 - 5
Col 56	EV6P11	Univ Sup rating - use of attending behavior	
Col 57	EV6P12	Univ Sup rating - to give clear directions	1 - 5
Col 58	EV6P13	Univ Sup rating - use different levels of questions	1 - 5
Col 59	EV6P14	Univ Sup rating - of reinforcing techniques	1 - 5
Col 60	EV6P15	Univ Sup rating - to clarify values	
Col 61	EV6P16	Univ Sup rating - of classroom management	1 - 5
Col 62	EV6P17	Univ Sup rating - of evaluation instruments	1 - 5
Col 63	EV6P18	Univ Sup rating - to evaluate inst. program	1 - 5
Col 64	EV6P19	Univ Sup rating - of self evaluation	1 - 5
Col 65	EV6P20	Univ Sup rating - teaching a 2 wk unit	1 - 5
Col 66	EV6P21	Univ Sup rating - model	1 - 5
Col 67	EV6P22	Univ Sup rating - responsibility	1 - 5
Col 68	EV6P23	Univ Sup rating - promptness	1 - 5
Col 69	EV6P24	Univ Sup rating - personal grooming	1 - 5
Col 70	EV6P25	Univ Sup rating - cooperation	1 - 5
Col 71	EV6P26	Univ Sup rating - acceptance of school norms	1 - 5
Col 72	EV6P27	Univ Sup rating - energy	1 - 5
Col 73	EV6P28	Univ Sup rating - concern for school	1 - 5
Col 79-80	04	Card 4	

Card 5

Weekly S.T. Schedule

Card Columns	Var. Label	Variable	Coding Convention
Col 1-2		Teacher #	
Col 4	TIA1	wk1 - Time - % Introd. Activity	0-04%
Col 5	TP1	wk1 - Time - % Planning	1-5-10%
Col 6	TPA1	wk1 - Time - % Assisting	2-20%
Col 7	TTT1	wk1 - Time - % Team Teaching	3-30%
Col 8	TFR1	wk1 - Time - % Full Responsibility	4-40%
Col 9	TSE1	wk1 - Time - % 2nd Environment	5-50%
Col 10	MR1	wk1 - Morale Rating	6-60%
Col 11	TIA2	wk2 - Time - % Introd. Activity	7-70%
Col 12	TP2	wk2 - Time - % Planning	8-80%
Col 13	TPA2	wk2 - Time - % Assisting	9-90-100%
Col 14	TTT2	wk2 - Time - % Team Teaching	
Col 15	TFR2	wk2 - Time - % Full Responsibility	
Col 16	TSE2	wk2 - Time - % 2nd Environment	
Col 17	MR2	wk2 - Morale Rating	
Col 18	TIA3	wk3 - Time - % Introd. Activity	
Col 19	TP3	wk3 - Time - % Planning	
Col 20	TPA3	wk3 - Time - % Assisting	
Col 21	TTT3	wk3 - Time - % Team Teaching	
Col 22	TFR3	wk3 - Time - % Full Responsibility	
Col 23	TSE3	wk3 - Time - % 2nd Environment	
Col 24	MR3	wk3 - Morale Rating	
Col 25	TIA4	wk4 - Time - % Introd. Activity	
Col 26	TP4	wk4 - Time - % Planning	
Col 27	TPA4	wk4 - Time - % Assisting	
Col 28	TTT4	wk4 - Time - % Team Teaching	
Col 29	TFR4	wk4 - Time - % Full Responsibility	
Col 30	TSE4	wk4 - Time - % 2nd Environment	
Col 31	MR4	wk4 - Morale Rating	
Col 32	TIA5	wk5 - Time - % Introd. Activity	
Col 33	TP5	wk5 - Time - % Planning	
Col 34	TPA5	wk5 - Time - % Assisting	
Col 35	TTT5	wk5 - Time - % Team Teaching	
Col 36	TFR5	wk5 - Time - % Full Responsibility	
Col 37	TSE5	wk5 - Time - % 2nd Environment	
Col 38	MR5	wk5 - Morale Rating	
Col 39	TIA6	wk6 - Time - % Introd. Activity	
Col 40	TP6	wk6 - Time - % Planning	
Col 41	TPA6	wk6 - Time - % Assisting	
Col 42	TTT6	wk6 - Time - % Team Teaching	
Col 43	TFR6	wk6 - Time - % Full Responsibility	
Col 44	TSE6	wk6 - Time - % 2nd Environment	
Col 45	MR6	wk6 - Morale Rating	
Col 46	TIA7	wk7 - Time - % Introd. Activity	
Col 47	TP7	wk7 - Time - % Planning	
Col 48	TPA7	wk7 - Time - % Assisting	
Col 49	TTT7	wk7 - Time - % Team Teaching	
Col 50	TFR7	wk7 - Time - % Full Responsibility	
Col 51	TSE7	wk7 - Time - % 2nd Environment	
Col 52	MR7	wk7 - Morale Rating	
Col 53	TIA8	wk8 - Time - % Introd. Activity	
Col 54	TP8	wk8 - Time - % Planning	
Col 55	TPA8	wk8 - Time - % Assisting	
Col 56	TTT8	wk8 - Time - % Team Teaching	
Col 57	TFR8	wk8 - Time - % Full Responsibility	
Col 58	TSE8	wk8 - Time - % 2nd Environment	
Col 59	MR8	wk8 - Morale Rating	

CARD 5 (continued)

Col 60	TIA9	wk9 - Time - % Introd. Activity
Col 61	TP9	wk9 - Time - % Planning
Col 62	TPA9	wk9 - Time - % Assisting
Col 63	TTT9	wk9 - Time - % Team Teaching
Col 64	TFR9	wk9 - Time - % Full Responsibility
Col 65	TSE9	wk9 - Time - % 2nd Environment
Col 66	MR9	Wk9 - Morale Rating
Col 67	TIA10	wk10- Time - % Introd. Activity
Col 68	TP10	wk10- Time - % Planning
Col 69	TPA10	wk10- Time - % Assisting
Col 70	TTT10	wk10- Time - % Team Teaching
Col 71	TFR10	wk10- Time - % Full Responsibility
Col 72	TSE10	wk10- Time - % 2nd Environment
Col 73	MR10	wk10- Morale Rating
Col 79-80	05	Card 5

Card 6

Weekly S.T. Schedule (Cont)

Card Column	Var. Label	Variable	Coding Conventi
Col 1-2		Teacher #	
Col 4	TIA11	wk11 - Time - % Introd. Activity	0-04%
Col 5	TP11	wk11 - Time - % Planning	1=5-10%
Col 6	TPA11	wk11 - Time - % Assisting	2-20%
Col 7	TTT11	wk11 - Time - % Team Teaching	3-30%
Col 8	TFR11	wk11 - Time - % Full Responsibility	4=40%
Col 9	TSE11	wk11 - Time - % 2nd Environment	5=50%
Col 10	MR11	wk11 - Morale Rating	6-60%
Col 11	TIA12	wk12 - Time - % Introd. Activity	7=70%
Col 12	TP12	wk12 - Time - % Planning	8=80%
Col 13	TPA12	wk12 - Time - % Assisting	9=90-100%
Col 14	TTT12	wk12 - Time - % Team Teaching	
Col 15	TFR12	wk12 - Time - % Full Responsibility	
Col 16	TSE12	wk12 - Time - % 2nd Environment	
Col 17	MR12	wk12 - Morale Rating	
Col 18	TIA13	wk13 - Time - % Introd. Activity	
Col 19	TP13	wk13 - Time - % Planning	
Col 20	TPA13	wk13 - Time - % Assisting	
Col 21	TTT13	wk13 - Time - % Team Teaching	
Col 22	TFR13	wk13 - Time - % Full Responsibility	
Col 23	TSE13	wk13 - Time - % 2nd Environment	
Col 24	MR13	wk13 - Morale Rating	
Col 25	TIA14	wk14 - Time - % Introd. Activity	
Col 26	TP14	wk14 - Time - % Planning	
Col 27	TPA14	wk14 - Time - % Assisting	
Col 28	TTT14	wk14 - Time - % Team Teaching	
Col 29	TFR14	wk14 - Time - % Full Responsibility	
Col 30	TSE14	wk14 - Time - % 2nd Environment	
Col 31	MR14	wk14 - Morale Rating	
Col 32	TIA15	wk15 - Time - % Introd. Activity	
Col 33	TP15	wk15 - Time - % Planning	
Col 34	TPA15	wk15 - Time - % Assisting	
Col 35	TTT15	wk15 - Time - % Team Teaching	
Col 36	TFR15	wk15 - Time - % Full Responsibility	
Col 37	TSE15	wk15 - Time - % 2nd Environment	
Col 38	MR15	wk15 - Morale Rating	
Col 79-80	06	Card 6	

Card 7

Performance Data on Individual Learners

Card Column	Var. Label	Variable	Coding Convention
Col 1-2		Teacher #	
Col 3-5	LID	Learner ID#	
Col 7-9	PRE1	PRETEST SCORE UNIT 1 (RAW SCORE)	
Col 10	OB1	UNIT 1 - OBJECTIVE 1	Coding convention
Col 11	OB2	UNIT 1 - OBJECTIVE 2	Obj achieved = 1
Col 12	OB3	UNIT 1 - OBJECTIVE 3	Obj not achieved =
Col 13	OB4	UNIT 1 - OBJECTIVE 4	
Col 14	OB5	UNIT 1 - OBJECTIVE 5	
Col 15	OB6	UNIT 1 - OBJECTIVE 6	
Col 16	OB7	UNIT 1 - OBJECTIVE 7	
Col 17	OB8	UNIT 1 - OBJECTIVE 8	
Col 18	OB9	UNIT 1 - OBJECTIVE 9	
Col 19	OB10	UNIT 1 - OBJECTIVE 10	
Col 20	OB11	UNIT 1 - OBJECTIVE 11	
Col 21	OB12	UNIT 1 - OBJECTIVE 12	
Col 22	OB13	UNIT 1 - OBJECTIVE 13	
Col 23	OB14	UNIT 1 - OBJECTIVE 14	
Col 24	OB15	UNIT 1 - OBJECTIVE 15	
Col 25-27	POST1	POSTTEST SCORE (RAW) UNIT 1	
Col 28-29	NOB1	Number of objectives - Unit 1	
Col 30-31	PERACH1	% of total obj. achieved by learner Unit 1	
Col 32			
Col 33-35	PRE2	PRETEST SCORE Unit 2 (Raw Score)	
Col 36	OBJ1	UNIT 2 - OBJECTIVE 1	Coding convention
Col 37	OBJ2	UNIT 2 - OBJECTIVE 2	Obj. achieved = 1
Col 38	OBJ3	UNIT 2 - OBJECTIVE 3	Obj. not achieved =
Col 39	OBJ4	UNIT 2 - OBJECTIVE 4	
Col 40	OBJ5	UNIT 2 - OBJECTIVE 5	
Col 41	OBJ6	UNIT 2 - OBJECTIVE 6	
Col 42	OBJ7	UNIT 2 - OBJECTIVE 7	
Col 43	OBJ8	UNIT 2 - OBJECTIVE 8	
Col 44	OBJ9	UNIT 2 - OBJECTIVE 9	
Col 45	OBJ10	UNIT 2 - OBJECTIVE 10	
Col 46	OBJ11	UNIT 2 - OBJECTIVE 11	
Col 47	OBJ12	UNIT 2 - OBJECTIVE 12	
Col 48	OBJ13	UNIT 2 - OBJECTIVE 13	
Col 49	OBJ14	UNIT 2 - OBJECTIVE 14	
Col 50	OBJ15	UNIT 2 - OBJECTIVE 15	
Col 51-53	POST2	POSTTEST SCORE (RAW) UNIT 2	
Col 54-55	NOB2	Number of Objectives - Unit 2	
Col 56-57	PERACH2	% of Total obj. achieved by learner Unit 2	
Col 79-80	7	Card 7	

Card 8

Standardized Scores - Learner Cognitive Attainment

Card Column	Var. Label	Variable
Col 17-24	PPRE1	Standardized Pretest Score - Unit 1
Col 25-32	SPOST1	Standardized Posttest Score - Unit 1
Col 33-40	SPRE2	Standardized Pretest Score - Unit 2
Col 41-48	SPOST2	Standardized Posttest Score - Unit 2